Forage Pellet production in Kenya

Introduction

It was planned to do a sector analysis and cost benefit analysis for forage pellet production in Kenya. Both analyses **have been cancelled** due to negative results while the assessments for the studies by Uwe Ohmstedt and discussions with feed producers and Udo Ruediger (ICARDA).

Background

The idea of pellet making out of forages in Kenya was born while a visit of Uwe Ohmstedt to Zambia, where a local company was experimenting with pellet production based on mixture of fresh *Brachiaria* and cereal bran. This seemed to me being an interesting alternative to the 'usual' conservation methods like hay making or ensiling of forage. Especially compared to hay, pellets are less bulky, easier to store, to transport and the rationing in feeding more precise.

Consequently, it was decided to give it a try and test it under conditions in Kenya and to see if it could become a business idea for investors or farmers.

Findings

While assessing the possibilities for pellet making, we found out that the challenge is hidden in the detail:

Pelletisers seem to be a niche product and we found out that there is only one company in Nairobi offering this type of machine. The machines offered have a low capacity, to narrow mesh openings as they are designed for poultry feed and only the smaller model was working on 220 V. The bigger machine with a slightly higher capacity already needed 380 V, which is normally not available in the county side. Another challenge is the high power consumption of the pelletisers, which would make the pellets extremely expensive.

As a preparatory step, the forages have to be pulverised to small particles. The pulveriser is another heavy investment to the 'pellet producer' and an energy consumer. Once

pulverized the material has to be mixed with bran, which serves as a 'glue' and additive to the forage. As the mixture of pulverized forage and bran has always to be of homogeneous consistence a mixer (e.g. a concrete mixer should be used, which is another investment.

Taking in consideration the investment in the three machines and their energy consumption, we do not see that small-scale pellet production can be economic viable, especially as the capacity of the machines are modest.

This judgement was supported by ICARDA's experience. They build a bigger prototype but finally did not find interested entrepreneurs who are interested to invest in the business.

Talks with a professional feed producer also did not show positive results. The challenge they see is the limited steady availability of the raw material and the permanent same quality of it. Forage quality depends on many factors, as soil quality, fertilisation status, harvest time and short transport distances to the factory. Their experiences show that it is impossible to get the raw material of a permanent same quality to produce a homogeneous product around the year, as it is required by their customers. Consequently, they produce feed out of other ingredients.

Conclusion

Taking all that in consideration we decided not to pursuit the forage pellet idea any longer.